

Indiana State Department of Health
Division of Trauma and Injury Prevention
American College of Surgeons – Committee on Trauma
Trauma Center Needs Assessment Process and Tools
Summary

The American College of Surgeons (ACS) – Committee Systems Evaluation and Planning Committee suggest thirteen tables in their *Trauma Center Needs Assessment Process and Tools* that was presented by the ACS in September 2014. The Indiana State Department of Health (ISDH) Division of Trauma and Injury Prevention have looked into the viability and results for each table. The findings may be found below.

Table 1 (page 4)

Are the resources available to do this measurement?

Not all of the resources are available.

If not, what is missing?

The triage and transport rule does not specify level I or II trauma centers, so this table does not completely match the instructions in the triage and transport rule.

The elements in the EMS registry for step two field triage criteria are not available with NEMSIS V2. They will be available with NEMSIS V3.

What information is available at this time?

The level I and II trauma centers, and the variables for step one field triage criteria are known

What are the conclusions for this table?

No conclusions are available at this time.

Table 2 (page 5)

Are the resources available to do this measurement?

Not all of the resources are available.

If not, what is missing?

Patients that meet step three field triage criteria must be identified, but the variables that are NEMSIS V2 do not capture step three.

There is no data element for injury time. E05_02 PSAP Call date/time (EMS registry) would be the most similar time variable. That variable was 55.7% complete for Q2 2014 data.

What information is available at this time?

E05_04 Date/Time Unit Notified (EMS registry) is 99.98% complete for Q2 2014 data.

What are the conclusions for this table?

No conclusions are available at this time.

Table 3 (page 6)

Are the resources available to do this measurement?

Not all of the resources are available.

If not, what is missing?

This table focuses on patients that meet any field triage criteria. The variables that NEMSIS V2 captures do not cover steps two, three, or four.

There is no data element for injury time. E05_02 PSAP Call date/time (EMS registry) would be the most similar time variable. That variable was 55.7% complete for Q2 2014 data.

What information is available at this time?

Arrival time at the facility and disposition are available.

What are the conclusions for this table?

There are no conclusions available at this time.

Table 4 (page 7)

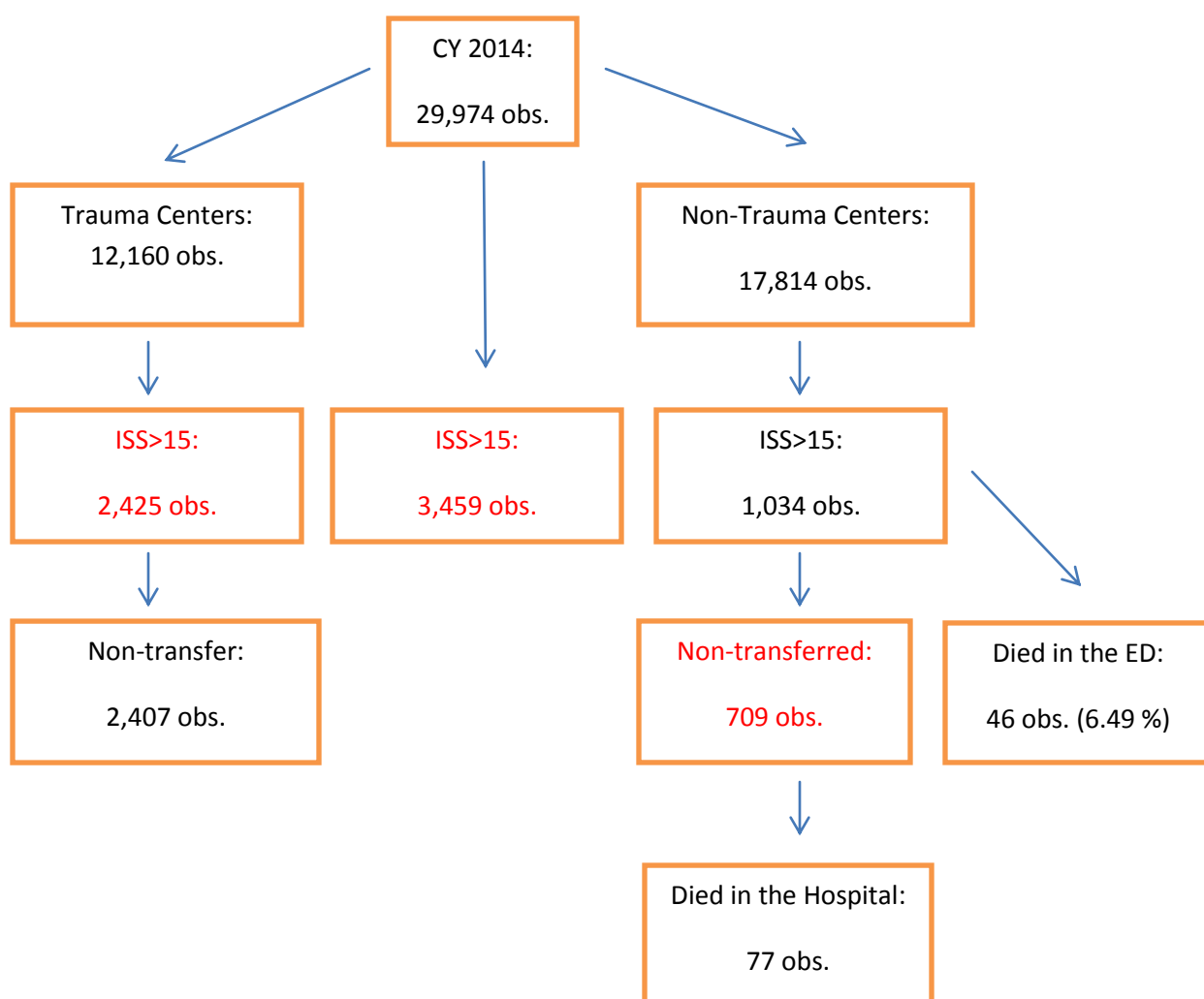
Are the resources available to do this measurement?

Yes

~~If not, what is missing?~~

What information is available at this time?

Level of trauma centers, ISS score, transfer status, calendar year (CY) 2014 data.



Number of patients with ISS>15 treated without transfer at non-trauma center facilities:
709. Percent = $709/1,034 = 68.57\%$.

For data quality purposes the number of patients with no ISS was determined. There were 63 patients with no ISS (0.21%).

Number of patients with ISS>15 treated at trauma centers: 2,425.

Number of patients with ISS>15 statewide: 3,459.

The ACS recommends calculating the percent of patients with ISS>15 treated in designated trauma centers compared with total number of injured patients with ISS>15 in the state. This percent is $2,425/3,459 = 70.11\%$.

What are the conclusions for this table?

68.57% of patients with ISS>15 are treated at non-trauma centers and are not transferred.

The recommended suggestion is <5%.

Table 5 (page 8)

Are the resources available to do this measurement?

Not all of the resources are available.

If not, what is missing?

Hospital discharge data, vital records, and state trauma registry data from neighboring states are not available at this time.

The variables that NEMSIS V2 captures do not cover step two field triage criteria.

Transport time may be influenced by traffic, construction and weather and may therefore be variable.

What information is available at this time?

Indiana state information for hospital discharge data through quarter 1 2014, vital records, and trauma registry data are available.

What are the conclusions for this table?

There are no conclusions available at this time.

Table 6 (page 9)

Are the resources available to do this measurement?

Yes.

If not, what is missing?

What information is available at this time?

Level of trauma centers, patient volume by center, number of patients with ISS>15.
CY 2013 data was used.

What are the conclusions for this table?

All three Level I trauma centers meet either parameter 1 or 2.

Parameter 1: Admissions \geq 1200	
Hospital Name	Number of Admissions
IU Health - Methodist Hospital	3365
Eskenazi Health	1234

Parameter 2: Admissions \geq 250 and ISS>15	
Hospital Name	Number of Admissions
IU Health - Methodist Hospital	848
IU Health - Riley Hospital for Children	919

Table 7 (page 10)

Are the resources available to do this measurement?

Not all of the resources are available.

If not, what is missing?

This table references geographical and catchment areas. How are these defined?

What information is available at this time?

Level I trauma centers and patient volume are known.

What are the conclusions for this table?

There are no conclusions available at this time.

Table 8 (page 11)

Are the resources available to do this measurement?

Not all of the resources are available.

If not, what is missing?

How do we know which areas are covered by E911 or Next Generation 911?

What information is available at this time?

Population by zip code is known.

What are the conclusions for this table?

There are no conclusions available at this time.

Table 9 (page 12)

Are the resources available to do this measurement?

Yes.

~~*If not, what is missing?*~~

What information is available at this time?

The certification level and the address of each EMS service are known. This information is not taken from the registry but from direct communication with each EMS service.

What are the conclusions for this table?

Still analyzing the data

Table 10 (page 13)

Are the resources available to do this measurement?

Yes.

~~*If not, what is missing?*~~

What information is available at this time?

The services service type (air versus ground) was not taken from the registry but from direct communication with the EMS services.

The elements E05_02 Date/Time PSAP Call (EMS registry) and E05_10 Date/Time Patient Arrived (EMS registry) are known.

The components for step one of the field triage criteria are known (Glasgow Coma Score, systolic blood pressure, respiratory rate, patient age and patient age units).

Time frame: Quarters 2 and 3 2014.

A 30 minute or greater time-based transport radius was used.

What are the conclusions for this table?

The average initial transport time for ground runs was 52.77 minutes. This was based off of 684 runs.

The average initial transport time for air runs was 97.01 minutes. This was based off of 85 runs.

This table looks at the reduction in time by using air versus ground transport. The average run time for the air runs was higher than the ground runs so there was no reduction. Is this due to long runs being done by air transport? The ACS suggests using a time-based transport radius but a geographical radius may be more appropriate.

Table 11 (page 14)

Are the resources available to do this measurement?

If not, what is missing?

What information is available at this time?

What are the conclusions for this table?

Table 12 (page 15)

Are the resources available to do this measurement?

Not all of the resources are available.

If not, what is missing?

There are no data on trauma team activation.

What information is available at this time?

The variables for step 1 field triage criteria are known.

What are the conclusions for this table?

There are no conclusions available at this time.

Table 13 (page 16)

Are the resources available to do this measurement?

Not all of the resources are available.

If not, what is missing?

Percent of time on diversion is unknown.

What information is available at this time?

Which hospitals are trauma centers is known.

What are the conclusions for this table?

There are no conclusions available at this time.